

# Materialise Magics Essentials <sup>25</sup>

What's new



# Magics Essentials 25 feature highlights

Magics Essentials is the data preparation software component that helps you 3D print in a profitable way. This release focuses on strengthening usability, speed, and control.

## Usability

- ▶ *Updated fixing pages* enhance your access to various tools
- ▶ Customize Magics in new ways thanks to *new toolpages*

## Speed

- ▶ *Perform operations* like Hollow, Honeycomb Structures or ShrinkWrap *faster*
- ▶ *Fix your part faster* with the improved AutoFix

## Control

- ▶ Mark faster and more precisely with *updated marking tools*
- ▶ Add *honeycomb structures* how and where you need them with new parameters

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- ▶ Honeycomb structures
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# UX/UI improvements

# General enhancements

## Selected parts on the Part List page

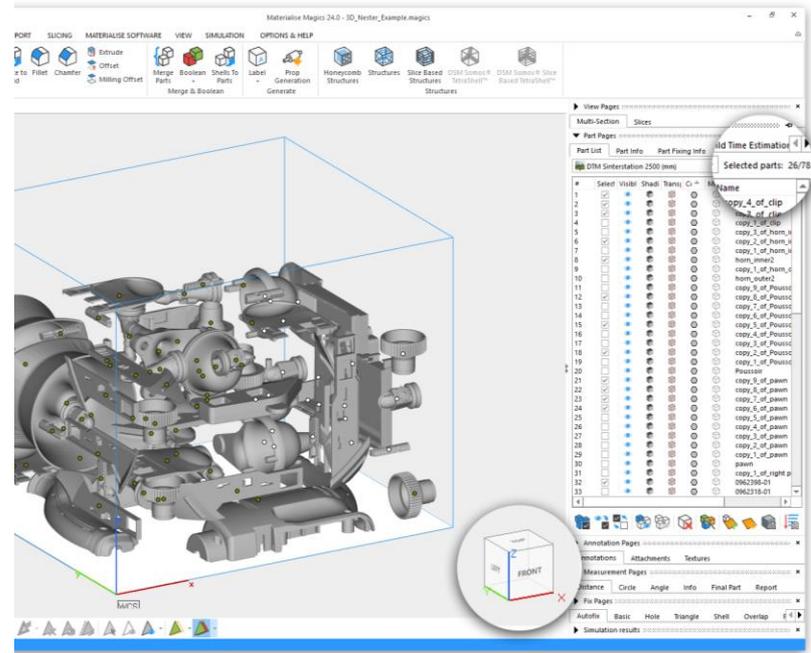
Visualize, at once, the number of selected parts compared to the total number of parts present in the scene.

## View cube

Quickly recognize the current scene view and easily select the desired 2D or ISO view.

## Batch rename

Assign the same prefix or suffix to all the selected parts at once via the Rename Part command.



# General enhancements



## **3D view manipulation**

Hold the Alt key and right mouse button inside the rotation circle and drag the mouse horizontally or vertically to rotate the view respectively along the vertical or horizontal direction.

Zoom in and out more accurately with respect to the cursor position.

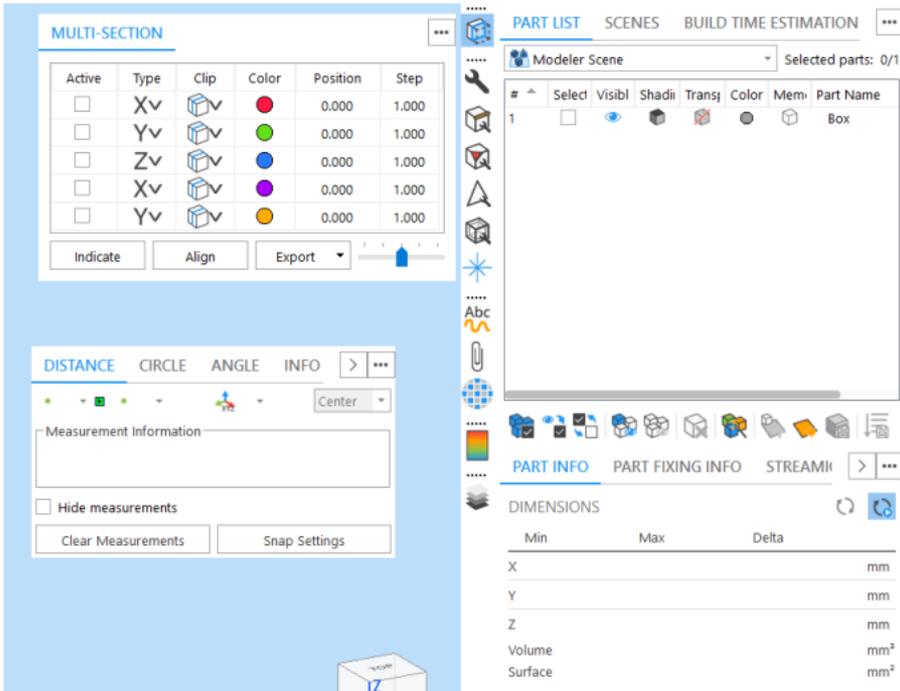
## **Save folder options**

Choose between saving all selected parts to their original folder or to the folder of the last part loaded. Change the preferred method in “Application working folder” page in Settings.

## **Parts sorting**

Benefit from an alphanumeric order when sorting parts by their names (e.g., in Part List toolpage).

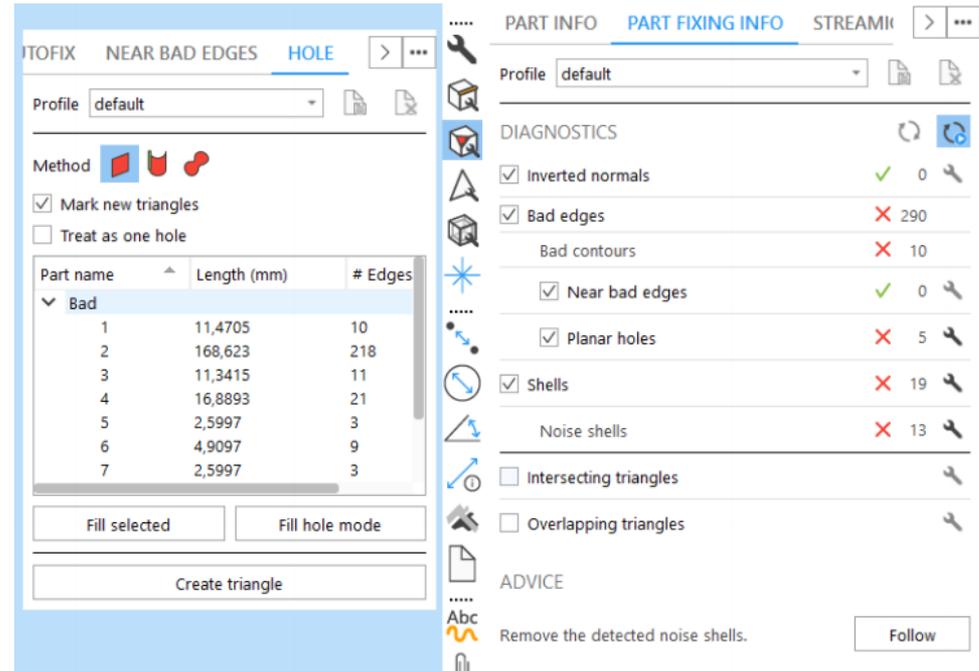
# Renewed toolpages



- ▶ Toolpages can now be added to a special toolbar, always **keeping the most important pages visible**.
- ▶ You have **full freedom** over the positioning of your toolpages: on the side, in a toolbar, or anywhere else on the screen. With the default profile, you keep **focus on the information pages**.
- ▶ Each toolpage has a small menu at the top right for pinning, closing, or collapsing the toolpage.
- ▶ In the **Customize UI** window you **have full control** over the position and visibility of the pages.

# Fixing toolpages

- ▶ The Fix Wizard has been fully integrated into the toolpages. This gives you **faster access** to any fixing functionality.
- ▶ In the Part Fixing Info page, the **advice** is now shown with a more convenient **Follow** option, which **fixes** your parts **using fewer clicks**. Additionally, you have the automatic fixing options per error type.



PART INFO PART FIXING INFO STREAMI

Profile default

Method

Mark new triangles

Treat as one hole

Part name	Length (mm)	# Edges
Bad		
1	11,4705	10
2	168,623	218
3	11,3415	11
4	16,8893	21
5	2,5997	3
6	4,9097	9
7	2,5997	3

Fill selected Fill hole mode

Create triangle

DIAGNOSTICS

Inverted normals 0

Bad edges 290

Bad contours 10

Near bad edges 0

Planar holes 5

Shells 19

Noise shells 13

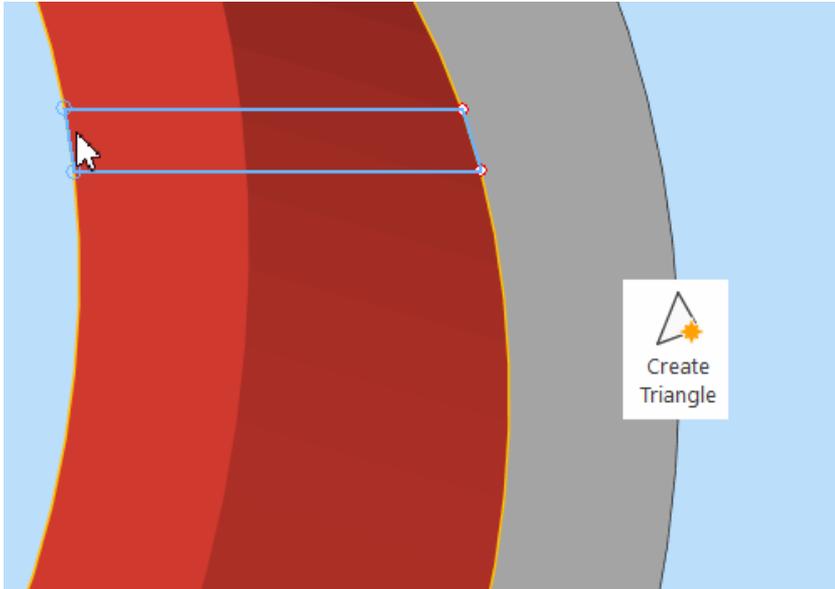
Intersecting triangles

Overlapping triangles

ADVICE

Remove the detected noise shells. Follow

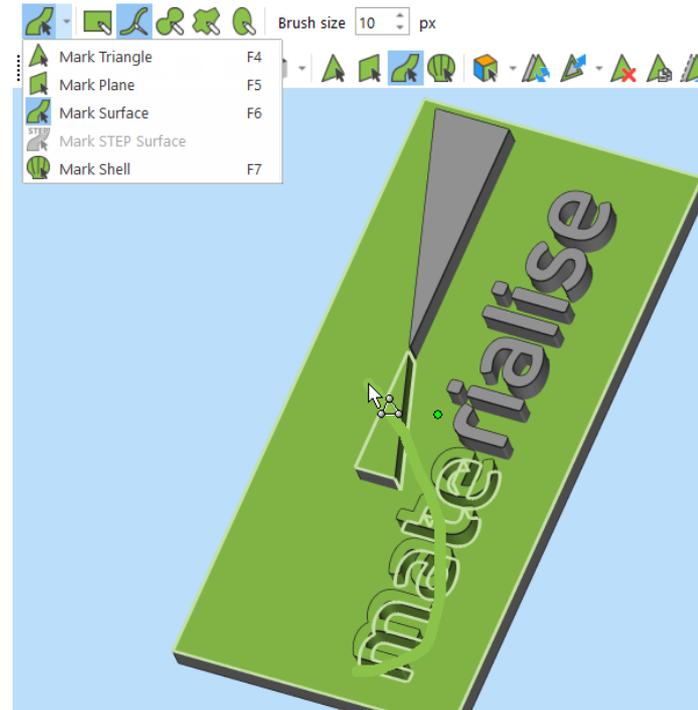
# Fixing improvements



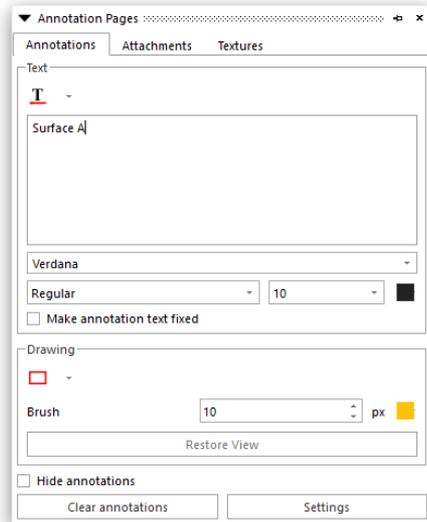
- ▶ The **AutoFix** function has become on average **40% faster**.
- ▶ The **Create Bridge** function has now been **incorporated into the Create Triangle** function, allowing both edges to be selected as well as points.
- ▶ The new Invert Normals function in the Fixing ribbon **inverts any marked triangles** if there is anything marked **or the entire part** if nothing is marked.

# Marking improvements

- ▶ The marking functions have been improved to allow users to work **faster** and have **more control** while marking.
- ▶ **Marking functions** like Mark Selection or Rectangle Selection have been **extended beyond marking single triangles** to mark entire shells, surfaces or planes.
- ▶ A specific marking toolbar pops up when a marking function has been activated, allowing you to choose **what** and how you mark. It also provides additional control over brush size as well as remesh options.



# Annotations page



- ▶ Text and drawing annotations are now combined in one page.
- ▶ Improved the flow for creating and editing your annotations faster.
- ▶ Annotations can now be hidden separate from the measurements.

HOME >  
Upload 3D Model

Did you create your 3D model in mm or inch?  
 mm  inch

**UPLOAD YOUR 3D MODEL**

RECENT MODELS

or drag and drop your files instead

**Materials**  
Polyamide (SLS) ⓘ

**Colors and Finishes**  
Natural white ⓘ

**Scale**  
100 %

0 x 0 x 0 mm

**Quantity**  
- 1 + x -- --

**Price**  
--

**ADD TO CART**

# Link to i.materialise

▶ Have access to your favorite online 3D printing order platform straight from Magics Essentials.

# Features

# Performance improvements

up to **3X** Faster results in Boolean operation

This also affects other operations including:

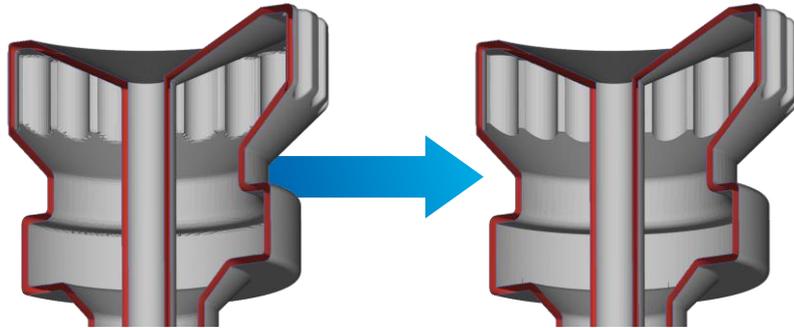
▶ Hollow

▶ Cut

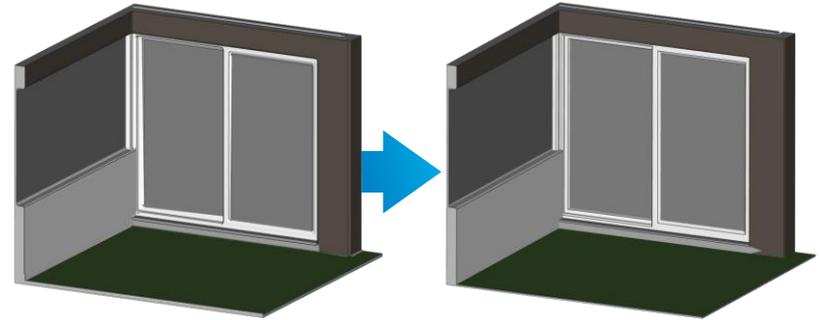
▶ Perforator

▶ Honeycomb Structures

# Improved algorithms



**Hollow**

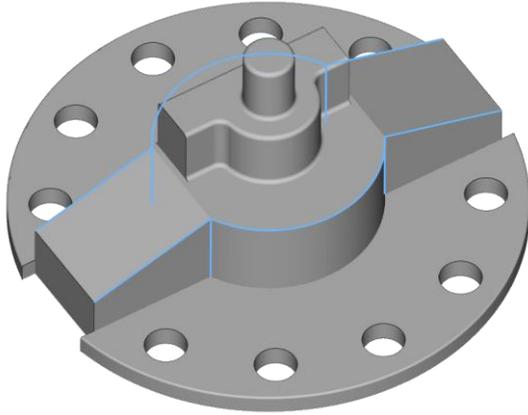


**ShrinkWrap**

- Improved accuracy
- Faster operation
- Better results on sharp edges

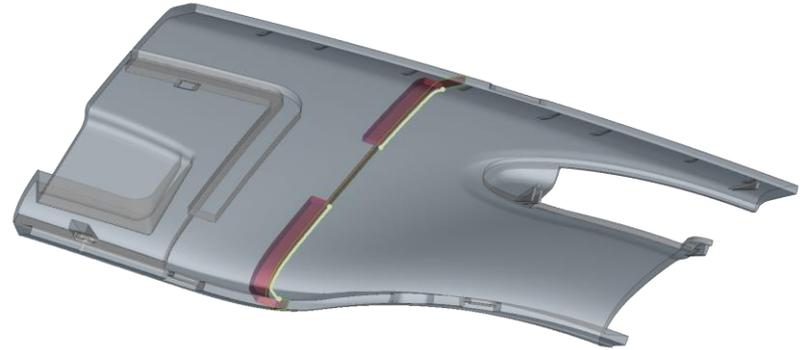
- Improved wrapping of small elements which are now retained
- Increased accuracy in preserving part edges
- Faster operation

# Editing enhancements



**Fillet**

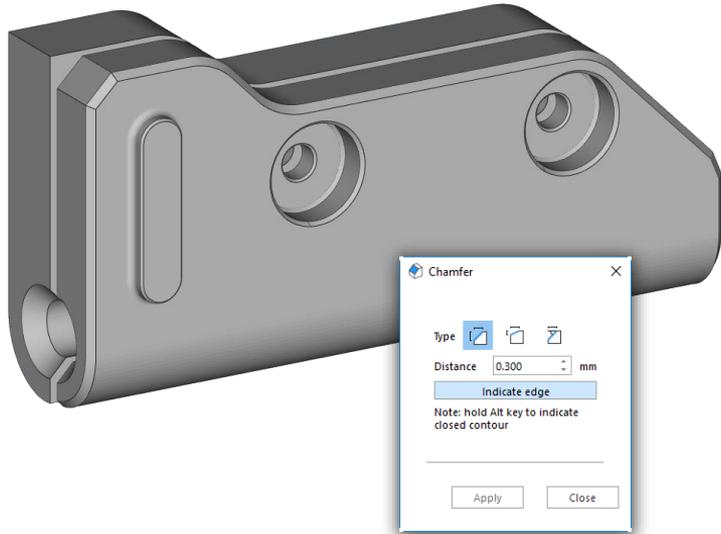
Select edges from different contours and round them at once.



**Lap joint cut**

Preview the lap joint cut and adjust the parameters before applying the final cut.

# Chamfer

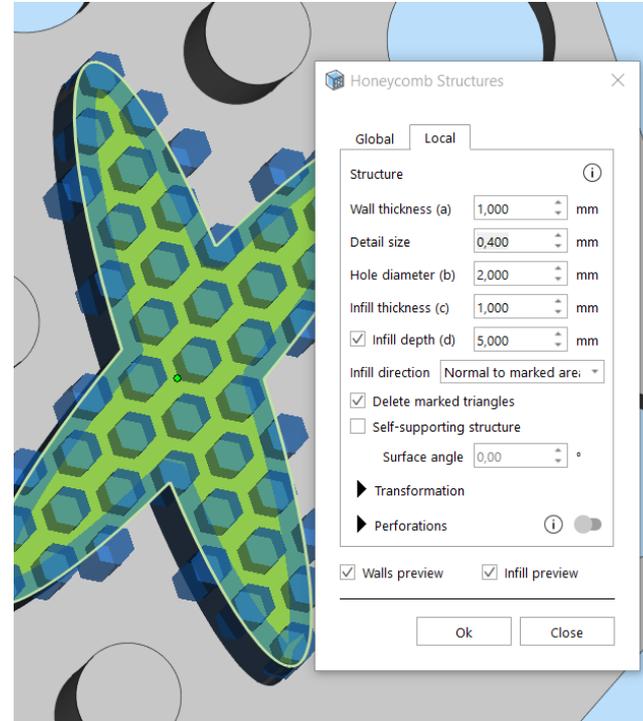


**Create a bevel** on fragile sharp edges of your parts to optimize their design for additive manufacturing (AM).

- ▶ Select multiple edges or entire contours to create a bevel at once.
- ▶ Choose between 3 different methods: equal distances, two distances, or a distance and an angle.

# Honeycomb structures

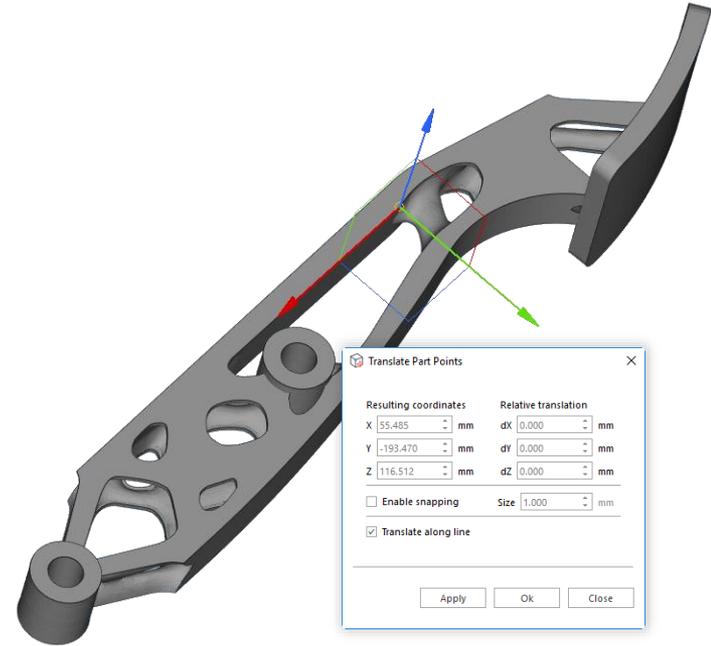
- Get **more control** over your honeycomb structures by creating them **locally** on a marked region.
- Create a honeycomb structure only for a desired depth with a new “Infill depth” parameter
- Get better results thanks to the integration of the improved hollow operation.
- **Smoother corners**
- Improved mesh and **reduced number of triangles** on flat surfaces.



# Translate Part Points

Get **better control** of geometry and vertex manual editing by **translating part points along a custom direction** or plane.

- ▶ Select the option “Translate along line”
- ▶ Select a point to translate and a line to orient the coordinate system to
- ▶ Interactively translate the point along an axis or on a plane by using respectively the axis or the squares of the coordinate system



# Other improvements

## **Label: Data Matrix**

Get more control on both pixel height and engraving label depth to customize the Data Matrix label to your needs.

## **Mass label**

Use negative distances between parts to arrange them closer together and create a higher density on the platform.

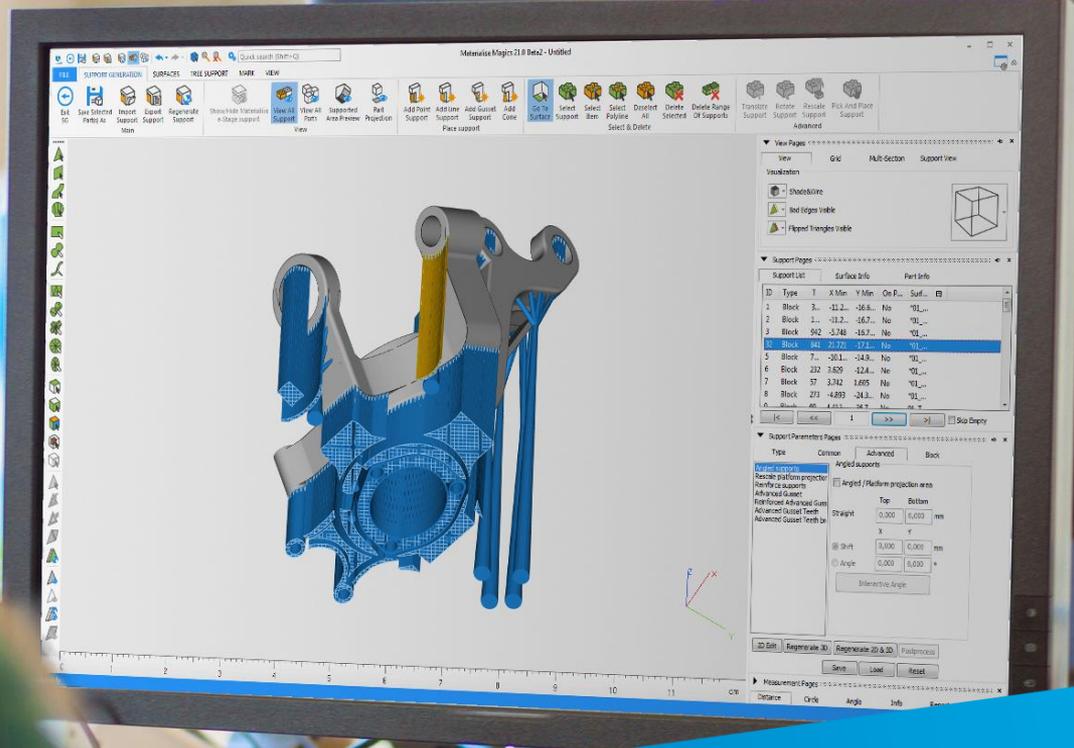
Magics	Import	Texture Support	Color Support	Export
AMF	◆			◆
DAE	◆	◆	◆	
DXF	◆			◆
FBX	◆	◆	◆	
OBJ	◆	◆	◆	◆
3D PDF		◆	◆	◆
PLY, ZCP	◆		◆	◆
SKETCHUP	◆	◆	◆	
STL	◆		◆	◆
VRML	◆	◆	◆	◆
X3D	◆	◆	◆	◆
ZPR	◆	◆	◆	◆
3DM (RHINO)	◆	◆	◆	
3DS, PRJ	◆	◆	◆	
3MF	◆	◆	◆	◆



## Import changes

### Focus on mesh file formats

To bring Magics Essentials closer to users' needs, the focus for the import file formats has shifted to mesh file formats as well as a few CAD formats, like Sketchup and 3DM.



For more information,  
contact your local Materialise office.

[materialise.com/contact-locations](https://materialise.com/contact-locations)